

Amendments to the Claims:

1-33. (Cancelled)

34. (New) A pharmaceutical composition comprising a polynucleotide in a pharmaceutically acceptable carrier, wherein the polynucleotide

(a) has a sequence of at least 7 nucleotides that specifically hybridizes to a first nucleotide sequence within an accessible region of the RNA component of human telomerase ("hTR"), wherein the accessible region is selected from the group consisting of nucleotides 137-196, nucleotides 290-319, and nucleotides 350-380 of hTR (SEQ ID NO:16),

(b) does not hybridize to a second nucleotide sequence within the template region of the hTR, said template region being nucleotides 46-55 of SEQ ID NO: 16, and

(c) is effective to inhibit the synthesis of telomeric DNA by telomerase.

35. (New) The pharmaceutical composition of claim 34, wherein said polynucleotide has a sequence of about 10 to about 50 nucleotides that specifically hybridizes to the first nucleic acid sequence.

36. (New) The pharmaceutical composition of claim 34, wherein said polynucleotide has a sequence of about 15 to about 35 nucleotides that specifically hybridizes to the first nucleic acid sequence.

37. (New) The pharmaceutical composition of claim 34, wherein said polynucleotide comprises a nucleotide analog or a non-naturally occurring nucleotide linkage selected from the group consisting of phosphorothioates, phosphoramidates, methyl phosphonates, chiral methyl phosphonates, 2'-O-methyl ribonucleotides, and peptide nucleic acids.

38. (New) A polynucleotide consisting of a sequence selected from the group consisting of:
CGT TCC TCT TCC TGC GGC CTG AAA CGG (SEQ ID NO:2)
CGT TCC TCT TCC TGC GGC CT (SEQ ID NO:3)
CGT TCC TCT TCC (SEQ ID NO:4)
CTG ACA GAG CCC AAC TCT TCG CGG TGG CAG (SEQ ID NO:5)

CTG ACA GAG CCC AAC TCT TC (SEQ ID NO:6)
CCA ACT CTT CGC GGT GGC AG (SEQ ID NO:7)
GCT CTA GAA TGA ACG GTG GAA GGC GGC AGG (SEQ ID NO:8)
GCT CTA GAA TGA ACG GTG G (SEQ ID NO:9)
GCT CTA GAA TGA ACG (SEQ ID NO:10)
GCT CTA GAA TG (SEQ ID NO:11)
GCT CTA G (SEQ ID NO:12)
CAT TTT TTG TTT GCT CTA GA (SEQ ID NO:13) and
CGG GCC AGC AGC TGA CA (SEQ ID NO:14).

39. (New) A pharmaceutical composition comprising a polynucleotide as recited in claim 38 in a pharmaceutically acceptable carrier.

40. (New) The pharmaceutical composition of claim 34, wherein said polynucleotide comprises a sequence of at least 7 nucleotides that specifically hybridizes to a first nucleotide sequence within an accessible region of the RNA component of a human telomerase (hTR), said accessible region being nucleotides 137-196 of SEQ ID NO: 16.

41. (New) The pharmaceutical composition of claim 40, wherein said accessible region is nucleotides 137-166 of SEQ ID NO: 16.

42. (New) The pharmaceutical composition of claim 34, wherein said polynucleotide comprises a sequence of at least 7 nucleotides that specifically hybridizes to a first nucleotide sequence within an accessible region of the RNA component of a human telomerase (hTR), said accessible region being nucleotides 290-319 of SEQ ID NO: 16.

43. (New) The pharmaceutical composition of claim 34, wherein said polynucleotide comprises a sequence of at least 7 nucleotides that specifically hybridizes to a first nucleotide sequence within an accessible region of the RNA component of a human telomerase (hTR), said accessible region being nucleotides 350-380 of SEQ ID NO: 16.